STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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May 09, 1985

Mr. Bryant Giles
Plant Manager
Ideal Basic Industries, Inc.
Star Route
Morgan, Utah 84050

Dear Mr. Giles:

Re: Mining and Reclamation Plan Review, Devil's Slide Operation, ACT/029/001, Morgan County, Utah

The Division has completed its initial review of the permit application for the Devil's Slide Operation (attached). This review is based upon information submitted to the Division by Ideal Basic in 1977 and 1978, and upon conditions noted in a recent site tour by Tom Portle and myself.

Division personnel would be glad to work with you in formulating a response to any of the review comments. Please format your response so that it references each Division comment by the appropriate Mined Land Reclamation Act rule number.

Due to the long expected mine life of Ideal Basic Industries' Devil's Slide Operations, it is recommended by the Division that the operator file for a permit based on a 5-year term basis. This allows both the operator and the Division to review and revise the reclamation plan based on changes in the mining operation or to improve the potential for reclamation success based on new or proven reclamation practices developed during the permit term. A 5-year permit term will allow modification or adjustment of the surety amount to reflect such changes in the reclamation plan and to adjust the discrepancy between estimated inflation rate by revising the bond to current dollars.

Please feel free to contact me for any clarification or assistance.

Sincerely,

Susan C. Linner

Susan C. Linner
Reclamation Biologist/
Permit Supervisor

jvb
Attachment
cc: L. Braxton
D. Darby
R. Harden
R. Summers
0275R

IDEAL BASIC INDUSTRIES, INC
Devil's Slide Operations
ACT/029/001
Morgan County, Utah

May 9, 1985

Rule M-3(1) - DD

The applicant shall submit a geologic map which delineates the structure and stratigraphy of the mine and adjacent areas. All faults and fracture zones should be identified.

The applicant shall delineate on a map all wells and springs and discuss any water rights associated with those sources.

The applicant shall identify all aquifers on and adjacent to the minesite, submit information to the Division as to their extent, depth below the surface, recharge source, and quality.

The applicant shall discuss any effects mining will have on groundwater sources or effects on water rights, and describe any measures that will be taken to mitigate groundwater impacts.

Rule M-3 (1)(d), (e) - RS

The applicant should submit a map depicting the items required by these subsections of Rule M-3. The map should depict all sources of surface water (including springs) and a detailed plan for controlling the drainage for all disturbed areas. Receiving streams for disturbed area runoff must be clearly delineated including points or areas of expected entry into the stream system. The map should also depict all water control facilities (i.e. plant water settling basins, dams, and impoundments) that are currently being used or have been used in the past. Additionally, any proposed ponds that are to be built as required by this review should be clearly depicted.

Rule M-3(2)(e) - SCL, TLP

A complete revegetation plan must be submitted and accepted by the Division before the mine plan can be approved. The plan must be appropriate to the postmining land use of livestock and wildlife grazing and include: seedmix(es) and rate of seeding in pure live seed (PLS) per acre, or stocking rate (stems/acre) for shrub plantings; seedbed preparation, seeding and planting techniques; and mulching, irrigation, or fertilization requirements. Season of seeding or planting should be indicated.

The intention of this regulation is to stabilize disturbed land and prevent erosion. This should be done as soon as possible after disturbance. Ideal Basic should identify areas that are no longer needed for active operations and plan to reclaim these in the first appropriate season. Of special concern to the Division is the plant refuse pile. During the Division's visit in April fines from this area were blowing away and contributing to off-site air and water pollution. As much of this area as possible should be covered with soil and revegetated quickly.

Protection of reclaimed areas from grazing by domestic or wild animals should be discussed. Specific methods should be outlined for areas where problems are anticipated. Heavy deer use was indicated in the Quarry Hollow area and could prove a problem.

Rule M-3(2)(f) - SCL

A timetable for each major step in the reclamation plan should be submitted. Dates can be given as days, weeks, or months postmining.

Rule M-3(5) - JRH

Although the operator has some exploration drilling information contained within the Ideal Basic exploration plan (EXP/029/003), the permit application package does not address the requirements under this Section. All exploratory drilling and related functions shall be included in the application under the requirements of M-3(5) and specific information related to all holes presently drilled or proposed as detailed in M-3(5)(a)thru(d).

Report form MR-9 shall also be filed with the Division for all mineral exploration work undertaken and approved within the limits of this rule. It shall not be filed in lieu of reporting requested under Rule M-8.

All holes made as step outs to an initial proposed drilling program should be described in (a) through (d) above to the Division as soon as possible. The additional information may be filed as an addendum to the original exploration notice and will not require approval.

RULE M-5 - JRH

Under the intent of the Mined Land Reclamation rules and regulations, the operator must provide a contingency for abandonment of the mine site in the form of a Surety Guarantee as prescribed in Rule M-5.

Design, estimates and drawings for reclamation activities should be made for at least the term of the mine permit, and if possible for the life of the mine. Regardless of the expected life of the mining operations, reclamation plans and cost estimates must be provided.

In order for the Division to determine the amount of surety to be provided, the operator must first submit a complete reclamation plan. Bonding requirements for the permit will be based on the worst case conditions during the permit term. In order to determine the worst case conditions during the permit term the operator must provide sufficient plans of operations as detailed under Rule M-3. Quantities of various reclamation activities should be based on and provided in information given in Form MR-1.

The basis for the surety amount will be the quantities and the scope of work as required in the reclamation plan. In order to determine the amount required for reclamation, productivity calculations for equipment and unit costs must be determined.

Reference materials used by the Division in bond cost estimating are; the "RENTAL RATE BLUE BOOK," the "MEANS SITE WORK COST DATA" and "CATERPILLAR PERFORMANCE HANDBOOK". These documents will be the source of data for finalizing cost estimates. The Cat Book gives the productivity rates for each size of equipment manufactured by Caterpillar. The Cat Book also gives a selection of operational factors that affect machine production. Each of these adjustment factors must be considered for use in the final calculations. Likewise, the Blue Book presents the cost of renting various pieces of equipment used in the mining industry, particularly those used for earthwork in reclamation activities. These costs range from hourly to monthly costs. In addition, the hourly operation costs must be included to account for fuel consumption and maintenance costs. The Blue Book cost does not include operator costs. The Means Book is used to determine labor and operator costs. As with the Blue Book rental rates for equipment, labor costs must also be estimated at subcontractor rates with overhead and profit included. The Means Book provides labor rates with these factors included. Additionally, inflation factors for bond estimates are derived from Means Cost Data. Inflation rates for construction during the previous three years are averaged and applied to the cost estimate as an inflation factor.

The operator may use other sources of information to determine reclamation cost. The basis or methodology used by the operator should be referenced and sufficient calculations should be provided by the operator so that a final cost estimate can be made and a fixed amount determined for the surety.

RULE M-8 - JRH

(2) The Annual Operations and Progress Report submitted by Ideal Basic Industries through Dec. 31, 1984 does not provide the gross amount of material moved during the year as well as the disposition of such material as required under M-8(b)(2). The operator should include the total amount of overburden or waste rock mined and removed, and locate where on the site the material has been placed. The operator should resubmit these data and incorporate total amounts of materials.

RULE M-10(1) Land Use - JRH

The operator must include in the reclamation plan, provisions for postmining land use compatible with probable land uses on abandonment. Realizing the nature and the magnitude of the disturbance, the operator will need to detail specific areas for land use.

Rule M-10(2) Public Safety and Welfare - JRH

(a) On form MR 2, submitted in June of 1977, the operator mentions on page 2a that coyote hole blasting was used up until the mid-50's in Quarry 1. The operator should state or determine if there are any hazards or remnants from these past operations which will pose a safety problem during operations. Although the plan indicates that there is no mining in Quarry 1 at present (1977), the area is being used for loadout operations. If hazardous conditions are present from coyote hole mining the operator should so state and offer a plan or commitment to mitigate these circumstances.

(b) The operator needs to address the disposal of trash and debris in the mine plan. The operator should propose a plan for and commit to a disposal plan for waste materials incidental to mining and that plan should be in accordance with the Rules and Regulations of the Division of Health.

(c) The operator has not submitted in the reclamation plan, any proposal or plans for the plugging and capping of drill, core, or other exploratory holes as set forth in Rule M-3(5).

(e) The operator should provide information as to what safety measures are being implemented for protection above highwalls, benches and other excavations at the site.

Rule M-10(4) Slopes - JRH

As part of the reclamation plan, the operator shall, if possible, regrade all waste piles and fills to a rounded configuration and at such slopes so as to minimize safety hazards and erosion. Such fills or waste piles need to be identified by the operator. The operator should also estimate and quantify final size and configuration of both the pits and the waste piles for at least the permit term.

Fills and waste piles should also include a description of proposed drainage control, surface erosion control, and vegetation which will be used for stabilization of the slopes.

Rule M-10(5) Highwalls - JRH

Reclamation standards for highwalls and open cuts consist of backfilling against or cutting back the wall to achieve a slope angle of 45 degrees or less. However, most of the open cuts at Ideal Basic are solid rock and if the operator can show sufficient design criteria, the above standards may be waived. The operator should also consider those areas above the cuts which consist of unconsolidated material that may have to be graded to achieve stability.

Rule M-10(7) Roads and Pads - JRH & RS

The operator has provided information as the the type and proceedures used for developing and maintaining roads within the permit area. Reclamation of roads and pads should be addressed in the plan. Although the expected mine life makes it difficult to determine final configuration and details, the operator should consider existing and proposed roads and pads for the permit term.

Several roads to the south of the affected area have not been included in the affected area. It appears that these roads are used for and in conjunction with the mining operations and should be included in the affected area.

Plans for existing roads and pads should be submitted which include culvert locations and designs, cross-drain designs, road ditch design and stability protection, and maintenance schedules and measures.

Rule M-10(8) Drainages - RS

The applicant must submit plans for all areas where natural channels or valley bottoms are to be altered or used as a disposal site. Approval for this activity can only be granted following adequate demonstration by the applicant of the expected runoff volumes and peaks and the proposed measures to handle this flow and erosional stability of the fill faces.

Rule M-10(9) Structures and Equipment - JRH

The operator needs to identify and commit to demolition and removal of all structures, utility connections, equipment and debris prior to regrading and abandonment. Approval may be granted for continuing or post mining land use of any of the above.

The Quarry Garage would appear to be part of the mining operation. The operator should consider adding the Quarry Garage and the adjacent pad to the disturbed area.

Rule M-10(11) Sediment Control - RS

The applicant must propose a drainage and sediment control plan. It is suggested that sedimentation ponds or catchment basins be designed for treatment of all disturbed runoff prior to discharge into the Weber River or its tributaries. Designs for diversions to route the drainage to the ponds will be considered to be integral to this plan. Plans for reclamation of the ponds should also be submitted to comply with subsection (13) of this rule (M-10). It is suggested that the all undisturbed area drainage be diverted from disturbed areas in order to reduce the amount of drainage requiring treatment. Additionally, a detailed description of work done to date and proposed work to be done as an effort to stabilize road and fill outslopes should be submitted.

Rule M-10(12) Revegetation - SCL

Baseline vegetation studies to determine the representative ground cover and species composition of vegetation communities in the proposed addition to the permit area should be done this summer to set a standard for revegetation success for the entire permit area. If there is more than one vegetation type on the permit area, there may be more than one success standard, or an average value can be used for an overall standard. Important communities (i.e., riparian habitat) should be replaced as closely as possible, and may have separate success standards.

Surveys should be done to determine whether any threatened or endangered plant or animal species exist on the site. All areas to be disturbed should be surveyed. Critical habitats for any wildlife species should be noted (i.e., riparian habitats, raptor nesting areas).

If the applicant is unsure as to what methods would insure successful reclamation, revegetation test plots may be implemented. If this is to be the case a complete revegetation plan will not need to be submitted until test plot trials have been conducted.

If revegetation test plots will be used, the treatments to be utilized should be discussed, along with some discussion of how success of the plots will be monitored and how the results will be used to determine final revegetation practices.

Monitoring of revegetated areas during the bond release period should be discussed. This will include monitoring methods, timing and duration of monitoring, and methods of determining whether or not the success standard has been achieved. Funds for monitoring of revegetation success should be included in surety calculations.

Exceptions to revegetation requirements may be granted for areas of solid rock outcrops, where soil is not available to cover them. Ideal Basic should indicate if it wants to request such an exception. Area and extent of any qualified outcroppings should be shown on a reclamation map, and updated as necessary.

Rule M-10(14) Soils - TLP

The applicant must determine the baseline soils condition in all undisturbed areas and identify potential borrow areas for use making up the anticipated net soils deficit. The OGM guidelines (enclosed) for soil management should be followed to generate a soils isopach map to facilitate successful soil removal operations.

Storage location for topsoil materials must be indicated on a map as per Rule M-3(1)(g).